--The invention pertains to a displacement sensor with a meander-shaped measuring winding.--

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Page 1, after line 12 insert the following heading centered on the page:

A2

--**SUMMARY OF THE INVENTION**--

Page 3, after line 17 insert the following heading centered on the page:

A3

--**BRIEF DESCRIPTION OF THE DRAWINGS**--

Page 3, replace the paragraph beginning on line 18, with the following rewritten paragraph:

--Additional advantages and features of the invention can be derived from the following description and from the drawings in which:

A4

Figure 1a shows a schematic diagram of an embodiment of a sensor according to the invention;

Figure lb is an end view of Figure 1a;

Figure 2 shows a schematic diagram of the voltage which can be tapped from the sensor illustrated in Figure 1a and of the magnetic induction;

Figure 3 shows a schematic diagram of the induction occurring in the sensor shown in Figure 1a;

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Figure 4a shows a different embodiment of an inductive sensor making use of the invention;

Figure 4b is a section view taken on the line A-B in Figure 4a;

A4 cont.

Figure 5a shows a schematic diagram of an exemplary embodiment of a sensor; and

Figures 5b and 5c shown the induction course in directions x and y, respectively.--

Page 4, after line 3 insert the following heading centered on the page:

A5

--**DESCRIPTION OF THE PRESENTLY PREFERRED EMBODIMENTS**--

Page 4, replace the paragraph beginning on line 4 with the following rewritten paragraph:

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-- Figure 5a shows an arrangement consisting of a core 31 with an air gap, in which a printed-circuit board 30 is present. A coil, through which current passes, generates an alternating field in the core, which pemeates the printed-circuit board 30. The broken lines represent lines of equal induction. The diagrams (Figures 5b and 5c) next to and below these lines show the course of the induction in the direction of motion of the measuring head (x direction) and crosswise to that (the y direction). The physical circumstances make it impossible to arrive at a perfectly linear course. In contrast, it is possible to achieve a curve with good symmetry in the x direction but not in the y direction. To avoid sensitivity to lateral displacements (y direction), the induction loop is designed so that it consists of conducting tracks 32 which extend in the direction of motion of the measuring core and also perpendicular

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A6 cont'd.

to the direction of motion; they thus form rectangles, which project deeply into the air gap of the measuring core and thus absorb practically all of the magnetic flux in this area.--

Page 4, replace the paragraph beginning on line 19 with the following rewritten paragraph:

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--Figures 1a and 1b show a design of this type. On the printed-circuit board 1 is a meander-shaped conducting track 2, one end of which is connected to an electrical connecting terminal 4 by the conducting track 3, whereas the other end is connected to connecting terminal 5. The measuring core 6 has a winding 7, through which an alternating current flows. The production of this alternating current is not described in detail here. It can be derived from, for example, DE 197-57,689.3-52 and from PCT/DE98/03,753, to which reference is made here.--

Page 8, replace the paragraph beginning on line 17, with the following rewritten paragraph:

A8

--Figures 4a and 4b show a schematic diagram of an angle sensor for measuring angles over a range of 360° and a section view through the sensor. On a rotatably supported shaft 17, a measuring core 16 is mounted by a holder 16a in such a way that a stationary, ring-shaped printed-circuit board 15, which is concentric to the shaft, lies in the air gap of the measuring core 16. When the shaft rotates, the measuring core 16 passes over the conducting tracks 18, 19. The two conducting tracks 18, 19 are applied to opposite sides of the printed-circuit board 15. Both have the same geometry but are offset 90° from each other. The conducting track 18 is shown on the top. It is divided into two halves, and in the middle it is connected by a

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conducting track 27, which forms a circle around the conducting track 18 and extends to the connecting terminal 23, to the electrical reference point of the evaluation circuit 28. On the side opposite the connecting terminals 21, 22, 23, 24, the conducting tracks 18 and 27 are connected electrically to each other by a contact point 27a. The measurement signal is tapped at the two other connecting terminals 21, 22 and also sent to the evaluation circuit. The conducting track 18 is designed in such a way that each of the two conducting tracks 27, 18 forms a loop. Some, all, or none of the magnetic flux of the measuring core premeates this loop as a function of the angular position. A voltage is induced accordingly. The voltages at the connecting terminals 21, 22 have a course which approximates a sine curve over 180°. The corresponding measuring loops on the rear (connecting terminals 21a, 23a, 24a, 22a) provide a sine curve offset by 90°, which corresponds to a cosine function. Appropriate evaluation in a circuit (not described in detail) then leads to a clear identification of the angle.--

A8 cont'd.

Page 9, after line 20 insert the following new paragraph:

-- As the measuring body 6 moves along the measuring length of the housing 1, it passes over a flux path area FPA as shown in Figure 1a, this area being where the alternating magnetic field flux generated by the inductive transmission element permeates the conductor loops 2 and 9 arranged on housing. Each conductor loop 2, 9 has a feed line, e.g., feed line 3 of conductor loop 2 and a return line such as return line 2R of conductor loop 2. It is the return line of these conductor loops which at regular intervals alternate into and out of the flux path area. The locations at which the return lines are for each return line spaced one from

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